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ABSTRACT OF THE DISCLOSURE

An apparatus comprising a first processing circuit and a second precessing circuit. The first processing circuit may be configured to generate a plurality of reconstructed samples in response to one or more macroblocks of an input signal. The second processing circuit may be configured to determine availability of intra 4 x 4 prediction modes for each luma sub-block of a current macroblock in response to available reconstructed samples adjacent to the current macroblock.